

Abstract

A canister purge valve for regulating fuel vapor flow between a fuel vapor collection canister and an intake manifold of an internal combustion engine. The canister purge valve includes a body having a wall defining a passage extending between a first port and a second port. The first port is adapted for fuel vapor communication with the fuel vapor collection canister. The second port is adapted for fuel vapor communication with the intake manifold of the internal combustion engine. An elastomeric actuator is at least partially disposed in the passage, and includes a first end, a second end spaced from the first end along a central axis, and a sealing surface between the first end and the second end. The sealing surface has a first diameter at a first portion and a second diameter at a second portion, the second diameter being wider than the first diameter. The elastomeric actuator is deformable between a first configuration that engages the wall to prohibit fuel vapor flow through the passage, and a second configuration space from the wall to permit fuel vapor flow through the passage.